International Symposium
on Open, Distance, and E-Learning

ISODEL 2009

Education in Digital Era:
Continuous Professional Development
for ICT-Based Learning

PROGRAM BOOK & ABSTRACT

December 8 - 11, 2009
Sheraton Mustika Yogyakarta Resort & Spa
Yogyakarta, Indonesia.

MINISTRY OF
NATIONAL EDUCATION
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INTERNATIONAL SYMPOSIUM
OPEN, DISTANCE, AND E-LEARNING 2009

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Education In Digital Era:
Continuous Professional Development
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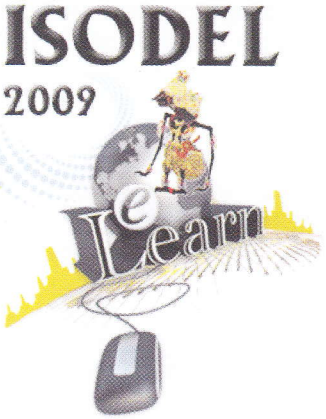

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MINISTRY OF
NATIONAL EDUCATION
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CENTER FOR INFORMATION AND
COMMUNICATION TECHNOLOGY FOR EDUCATION
MINISTRY OF NATIONAL EDUCATION

WELCOME MESSAGE

Welcome to Yogyakarta, City of Gudeg! Gudeg is a traditional food from Yogyakarta and Central Java. It is made from young jack fruit, boiled for several hours with palm sugar, and coconut milk. Additional spices include garlic, shallot, candlenut, coriander seed, galangal, bay leaves, and teak leaves, the latter gives a brown color to the dish. Gudeg is usually served with white rice, chicken, hard-boiled egg, tofu and/or tempe, and a stew made of crispy beef skins (sambal goreng krecek).

We are pleased to announce that we are organizing this International Symposium on Open, Distance and E-Learning 2009 (ISODEL 2009) at Sheraton Mustika Yogyakarta Resort & Spa, Yogyakarta-Indonesia, on December 8-11, 2009. The main theme of this symposium is "Education in Digital Era: Continuous Professional Development for ICT-based Learning." The sub themes are (1) the emerging ICT for education, (2) international experiences in open, distance, and e-learning, (3) ICT-based learning, and (4) continuous professional development for teachers. This theme was chosen since we believe that the continuous professional development for teachers, lecturers, instructors, researchers, resource persons and other education personnel is pivotal to them particularly those who are implementing the open, distance and e-learning in their businesses.

The symposium aims at acquiring ideas, thoughts, concepts, sharing knowledge and experiences, disseminating best practices and innovation, and finding out a recommendation for future development of implementation of information and also communication technology (ICT) for open, distance and e-learning. The International Symposium on Open, Distance and E-Learning 2009 (ISODEL 2009) will provide a unique forum for engagement and interaction between policy makers, practitioners, scientists, academician from across the globe to acknowledge and share ideas, inputs and recommendation in solving multinational problems with current strategy and tactics from experts within a mutual synergy and collaboration.

It is our great expectation that this symposium will provide a positive impact for education and for any nations as a whole which is necessary for their continuous human resources development known as Education for Sustainable Development. Hopefully that this symposium will be attended by 500 participants from all over the globe. Speakers from many countries and institutions will share their views and expertise, knowledge and experiences with speakers and participants from all around the world. As such, this symposium is definitely a good place to promote and market products and services.

We are proud to choose Yogyakarta as the venue of ISODEL 2009 because Yogyakarta is famous as a student, cultural, and historical city. In addition, we have a very strong support from the Governor of Yogyakarta as well as from the Provincial Office of the Education, Youth and Sports.

We are looking forward to a successful ISODEL! Thank you very much for all speakers, participants and the committee who are making ISODEL 2009 successful!

With the warmest regards,

Lilik Gani HA
President of Symposium
Director of ICT Center for Education
Ministry of National Education
Republic of Indonesia

TABLE OF CONTENT

ABOUT ISODEL 2009

OBJECTIVES

- Acquiring ideas, thoughts, and concepts on implementation of information and communication technology for open, distance, and e-learning
- Sharing knowledge, experiences and thoughts on implementation of information and communication technology for open, distance, and e-learning
- Disseminating best practices and innovation of implementation of information and communication technology for open, distance, and e-learning
- Conveying recommendation for future development of implementation of information and communication technology for open, distance, and e-learning.

THEME

" Education in Digital Era: Continuous Professional Development for ICT-based Learning"

SUB-THEMES

1. The Emerging ICT for Education:
   - Cutting-edge technologies and infrastructure
   - International experience in managing ICT for education
   - Pro's and Con's in ICT implementation
   - The role of technology in education: e-Learning, open source, open resource
2. International Experiences in ODEL:
   - Teachers training institutes and universities experiences in ODEL
   - Teachers experiences in ODEL
   - The role of open and virtual university in teachers qualification upgrading
   - Indonesian experiences in ODEL
3. ICT-based Learning:
   - The use of ICT in enhancing student-centered learning
   - Cultural issues in developing countries in using ICT
   - Learning model innovation (blended learning)
4. Continuous Professional Development for Teachers:
   - Continuous Professional Development: Student-centered Teaching
   - A continuous effort to improve the teachers teaching quality
   - Improving the Teachers Training Colleges
   - International experiences in preserving teacher professionalism

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5. Office of Research and Development, Ministry of National Education.
6. SEAMEO Regional Open Learning Center (SEAMOLEC).
7. World Bank.
8. Indonesia Open University (Universitas Terbuka).
9. Office of Education, Youth And Sports of Yogyakarta Province.

OFFICIAL LANGUAGE

The official language of this Symposium is English, and to a certain extent, a translator is provided to facilitate some sessions.

WEBSITE

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E-LEARNING IN HIGHER EDUCATION – A STUDENT PERSPECTIVE

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The term e-learning is generally used to refer to the use of Information and Communication Technologies (ICTs) in teaching and learning to help students learn. There are still many teacher-centered approaches learning in Indonesia, but an increasing number are now trying the web-based learning systems, for the most part, limited to informational materials that supplement class topics. Considering the various factors countered web-based learning in Indonesia, this paper discussed the effectiveness of e-learning, web-based learning particularly. To address this issue, a survey was conducted in several universities in Yogyakarta, which is well-known as education city in Indonesia. The study takes up the following issues: (1) the current state of e-learning implementation, (2) barriers to effective implementation of e-learning. We were particularly interested in what barriers, if any, were interfering with web-based learning implementation, and (3) the impacts of e-learning. The result of the study could be used as a the basis for improving e-learning in higher education

Keywords: e-learning, web-based learning, yogyakarta

1 Introduction

The borderless world created by the advent of technological advancement demands a paradigm shift in approach to teaching and learning especially in Higher Education Institutions, in particular conventional campus-based universities. The institutions currently place great emphasis on the implementation of e-learning.

The term e-learning is generally used to refer to the use of Information and Communication Technologies (ICTs) in teaching and learning to help students learn. E-Learning is naturally suited to distance learning and flexible learning, but also can be used with face-face teaching.

ICT can be considered as the technology that facilitates the processing, transfer and exchange of information and communication services. Examples of Communications Technology include digital networking, television, and mobile telephones. Information Technology permits sophisticated interactive use of the World Wide Web (WWW), which has proved to be a powerful and very flexible source of information. In the context of supporting teaching and learning in higher education, information technology can provides new methods of handling and storing

information and communications technology allows the information to be moved around within a campus, between campus and individuals. Flexible teaching and learning environments have been made possible by ICT applications in using the Internet, networked computers (internet, chat sessions, videoconferencing), multimedia, animation, simulation and images (Indrianti, 2007).

The objectives of using ICTs in higher education are (1) to use new technology, (2) to increase student motivation, (3) to improve the effectiveness of education, (4) to enhance the university reputation, and (5) to adapt the latest technology to education (Wong and Yoshida, 2001). The goal is to employ ICT as an enabling tool to access information and gain knowledge through self-paced learning, or through interactions with lecturers/professors and fellow students. Another case of using ICT in higher education is to give students the opportunity to work on their own seeking data and information using asynchronous facility such as the Internet. E-learning that is based on online knowledge management also strengthened via the participation and interaction with students. E-learning takes advantage of the resources and experts available on the Net and provides students access to them, creating interactive methodologies to work in a network with other peers in a virtual space. Sharing the knowledge of the group beyond the individual participants' time zones or geographic locations (Garcia, 2006)

E-learning, which is based on various multimedia contents, has even been become popular in Indonesian higher education. In Indonesia, e-learning programme began in mid 1990s with the advent of internet preceded by information technology introduction to Indonesia in late 70s and early 80s (Basuki, 2007). As one of the developing countries, the Government of Indonesia realizes that in order to improve its national competitiveness, it is decided to improve the educational system through the utilization of Information and Communication Technology (ICT).

Regarding the educational system, since 2003 the Ministry of National Education through the Directorate of General for Higher Education Directorate has implemented a strategic plan called Higher Education Long Term Strategy (HELTS) 2003-2010. One of the programs covered in HELTS is focused on the development of a network information system that could link all of the national universities in Indonesia through Indonesian Higher Education Network

(INHERENT). The objectives of INHEREHT include the service integration between universities, connection to external networks and advanced networks features (Sulistyo, 2003)

There are still many teacher-centered approaches learning in Indonesia, but an increasing number are now trying the web-based learning systems, for the most part, limited to informational materials that supplement class topics. Webometrics (2009) considers 39 Indonesian universities in the first 6000 of world rank starting from the 572nd rank, which is given to Gadjah Mada University. Six of the 39 universities are located in Yogyakarta, which is well known as education city. However, web-based learning programme in Indonesia countered various factors such as the infrastructure, economic limitation particularly in the access to the internet, lack of English language mastery, a language commonly used for e-learning, and the negative lecturers' and students' attitude toward ICT. With the limited infrastructure, web-based learning is limited to those who have access to ICT. Cultural factors also have significant impacts on the development of e-learning in Indonesia. Indonesian in general prefers talking over writing, the result of oral tradition legacy, prefer attending the lecture over self-study. Hence Indonesian students prefer to communicate or interact directly with other students and or lecturer than to communicate in a virtual way as commonly found in e-learning.

As e-learning is rapidly introduced and popularized, the assurance of education quality in higher education institutions is becoming an increasing important issue. Considering the various factors countered web-based learning in Indonesia, it is important to evaluate the effectiveness of the implementation of it. In this regard, student as the learner is the focal point on the entire system and plays a predominant role in the design and to conduct of the learning program.There have been several literatures pointed out the development of e-learning. However, little attention has been paid to the effectiveness of e-learning in particular from the view point of students. Therefore, the purpose of this study is to describe the impact of e-learning to students as the learners. To address this issue, a survey was conducted in several universities in Yogyakarta Special Region (DIY). The study takes up the following issues: (1) the current state of e-learning implementation, (2) barriers to effective implementation of e-learning. We were particularly interested in what barriers, if any, were interfering with web-based learning implementation, and (3) the impacts of e-learning.

2 Research Methodology

Students from 7 universities were surveyed, with one questionnaire distributed to each of the student. The universities include Gadjah Mada University (UGM), Indonesia Islamic University (UII), Yogyakarta Muhammadiyah University (UMY), Atma Jaya University of Yogyakarta (UAJY), Yogyakarta State University (UNY), Sanata Dharma University (USD), and University of National Development "Veteran" Yogyakarta (UPNVY). We have to accept that there may be some fields of education which are suitable for using technology and some which are not. Information technology, science, engineering, language etc are well suited but some teachers feel a subject like mathematics or philosophy is not. Therefore we involve students from exact and non-exact discipline of diploma and undergraduate programs. Response ratios were 97% (349 valid questionnaires from the total of 361 questionnaires)

In the survey, we were interested in assessing the degree of IT implementation, especially in higher education both for administrative and learning purposes. We also concerned with the importance and the benefit of web-based learning to the students. The result of this study would provide useful information for policy makers, university leaders, administrators and teaching staff to improve learning management system.

3 The Result of the Study

3.1 E-learning implementation

Based on the survey on ICT usage, Figure 1 shows the implementation of e-learning in DIY universities The chart presents a variety of universities multimedia/IT usages, including administrative communication and classroom-related usages occurring frequently in DIY universities. It is shown that the use of computer for presentation (Power Point, etc.) using liquid crystal display (LCD) is most frequently used in learning process. The figure also shows that the use of conventional technologies in education such as OHPs is still high. In the context of internet related technologies, the use of email for submitting assignment is the most frequently used, which is then followed by the use of internet-based course materials. Single-minded focus on providing pre-packaged course materials, assignments, and course information (syllabi, resumes, class schedule) on the web dominates web-based learning at present. On the other

hand, the use of email for administrative communication is the most frequently used compared to the use of facsimile and telephone.

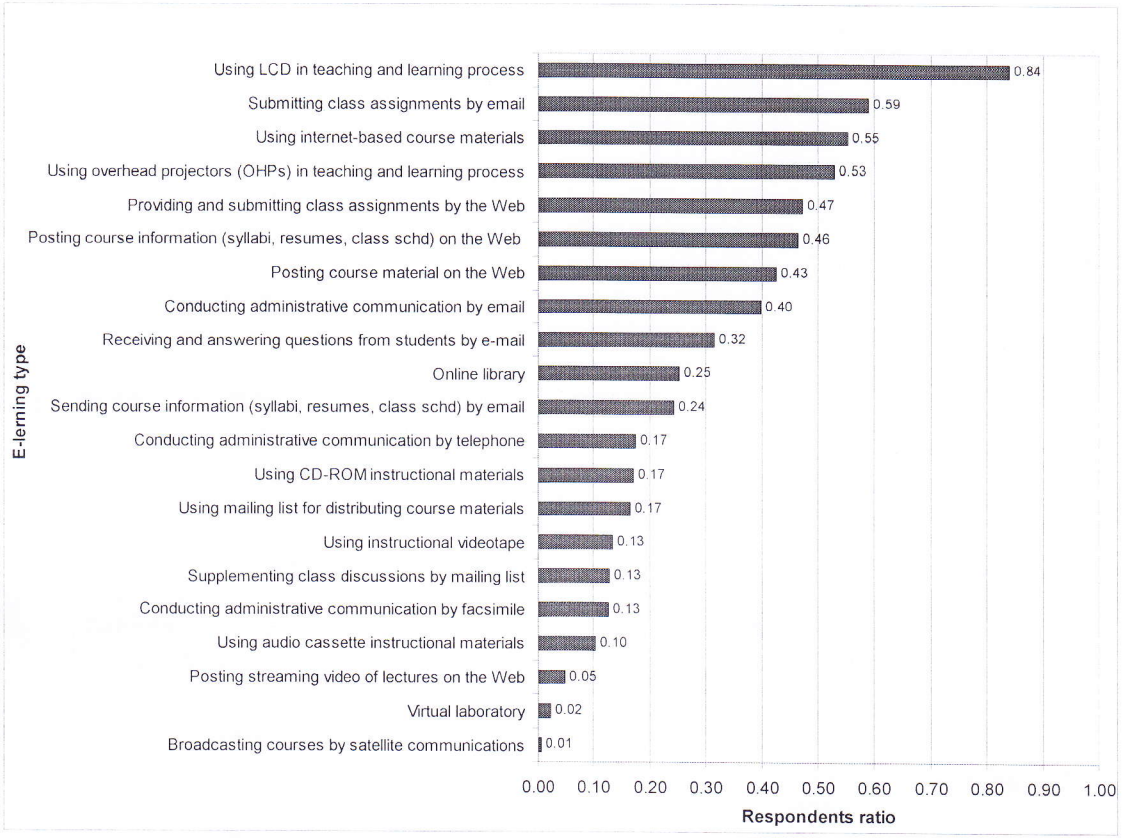

Figure 1. E-learning in DIY Universities

3.2 Web-based learning

Successful e-learning is judged by whether it increases effectiveness and this is measured by improvement in student performance. In assessing the effectiveness of e-learning, we focus on web-based learning. Figure 2 depicts students' assessment to the implementation of web-based learning. The chart presents the performance of the web-based learning system, scored from 0 (none or no function) to 5 (very big or very much). The chart shows that current web-based learning system help students learn more easily but on the other hand web accessibility and reliability still as well as document security need to be improved. This is in line with their frequency of accessing the web, which is just about average. However, according to the

respondents the web-based has the potential to improve their performance and motivation. The chart also shows that universities have not utilized the web effectively. This is shown from the figure that the number of course materials uploaded in the web is just below average. Such is the case of the number of lecturers conducting web-based learning, assignments submitted via web, web-based feedback too the assignments, and online mentoring that are below average. The web-based learning has also not been able enough to substitute face-to-face class Yet Figure 2 shows that online interactions both between students and lecturers and among students are still rare.

Turning to Figure 1, we find that lecturers and infrastructure could be the important factors to improve the web-based learning. According to respondents, purposes besides the accessibility and reliability of the web computer terminals provided by the institutions for learning purpose need to be improved. The adoption of ICT, in particular web-based learning, appears to be the notion that introducing the latest technology that will increase student motivation for learning. However, the there is still small number of lecturers who conduct web-based learning.

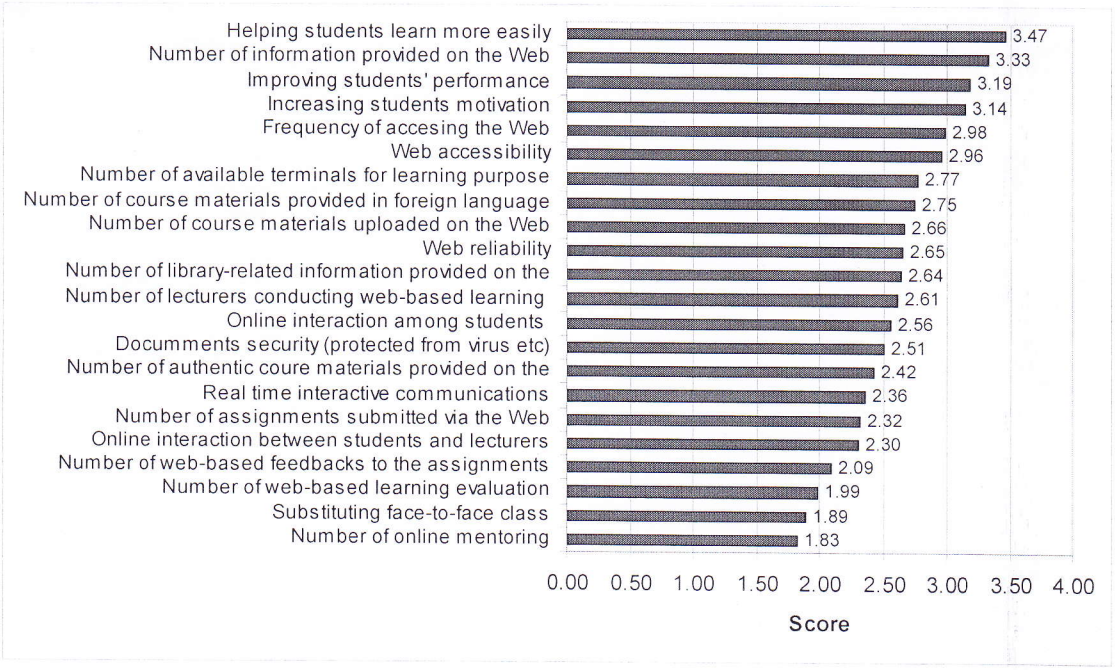

Figure 2. The effectiveness of web-based learning in DIY universities

3.3 Barriers to the use of web-based learning

Web-based learning are perceived as the mode of delivery in terms of the potential it has to enhance educational effectiveness and the reputation of the institutions. On the other hand, however, there are some barriers on the students particularly to its adoption.

Figure 3 identifies that own facilities, including computer and internet, and cost are the most concerns in the use of web-based learning (WBL) in DIY institutions. They have nonetheless become a real barrier to web-based learning in the educational process. Performance of the web, including the display and reliability of the web, is also identified as a factor that has the potential to make students uninterested in joint the system. While on student side, the ability in using internet and foreign language are also identified as an obstacle to making the use of it efficient and effective. The figure also shows that time required for accessing the web also becomes one concern to the students. While on the other hand, minimum use of the web by lecturers can be the reason of why web–learning has not been interesting enough to students.

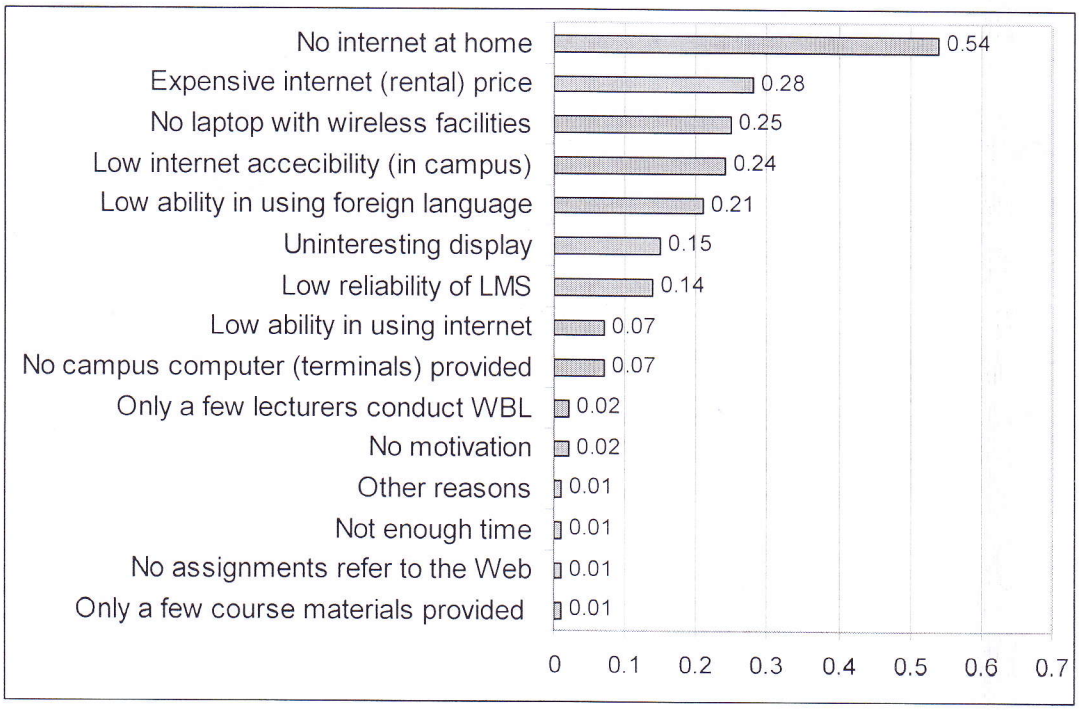

Figure 3. Barriers to web-based learning in DIY universities

3.4 The impact of web-based learning

The improvement in student performance is the most important outcome of web-based learning (Jameson, 2002). Many institutions prioritize goals of "increasing student motivation" and "adapting the latest technology to education" (Yoshida and Bachnik, 2003). The result of the study, which is represented in Figure 4, shows that there is low achievement on the goal of "improving motivation for learning" and "improving self motivation". A relatively large proportion of students agree that web-based learning has the potential to improve students' knowledge and ability in using ICT. However according to respondents, web-based learning does not improve well the interaction between students and lecturers. If we link to the result discussed previously, the rationale is that there are only few lecturers are involved conducting web-based learning.

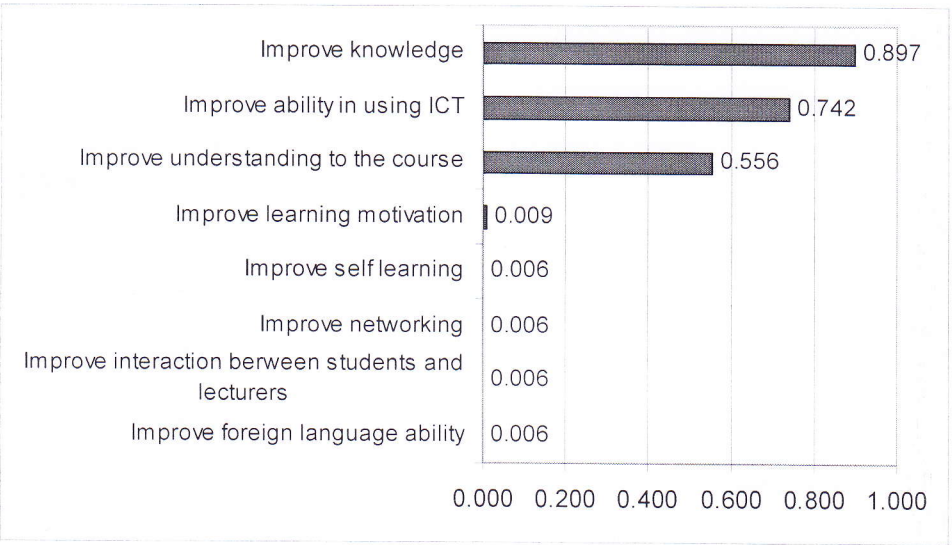

Figure 4. Positive impact of web-based learning

Negative impacts of web-based learning is shown in Figure 5. About 55% of respondents agree that web based learning reduces social interaction and about 40 percent of respondents said that web-based learning reduces communication ability. Attention must be given to the fact that some respondents agree that web-based learning reduces their learning responsibility. This is because often time they are more interested in opening other sites, such as pornography, rather than searching the web for learning purpose. According to about 5% of respondents, web-

based learning increase their living cost especially internet cost. Less negative impacts include reducing students-lecturers interaction.

Some respondents also complaint that web based learning is time consuming, making tired more easily, and making them to be internet-minded. Time consuming tends to make web based learning inefficient. Furthermore the result of the study also indicates some other negative impact as increasing plagiarism. In addition, some students feel that they become less struggle and lazy in writing lecture notes, going to the library and attending face-to-face class. Some invalid literatures are also found in the system as they do not show the original writers. Document security also becomes a concern. Ineffective use of web based learning is based on their opinion that the course materials provided in the web is not explained in detail so that difficult to understand.

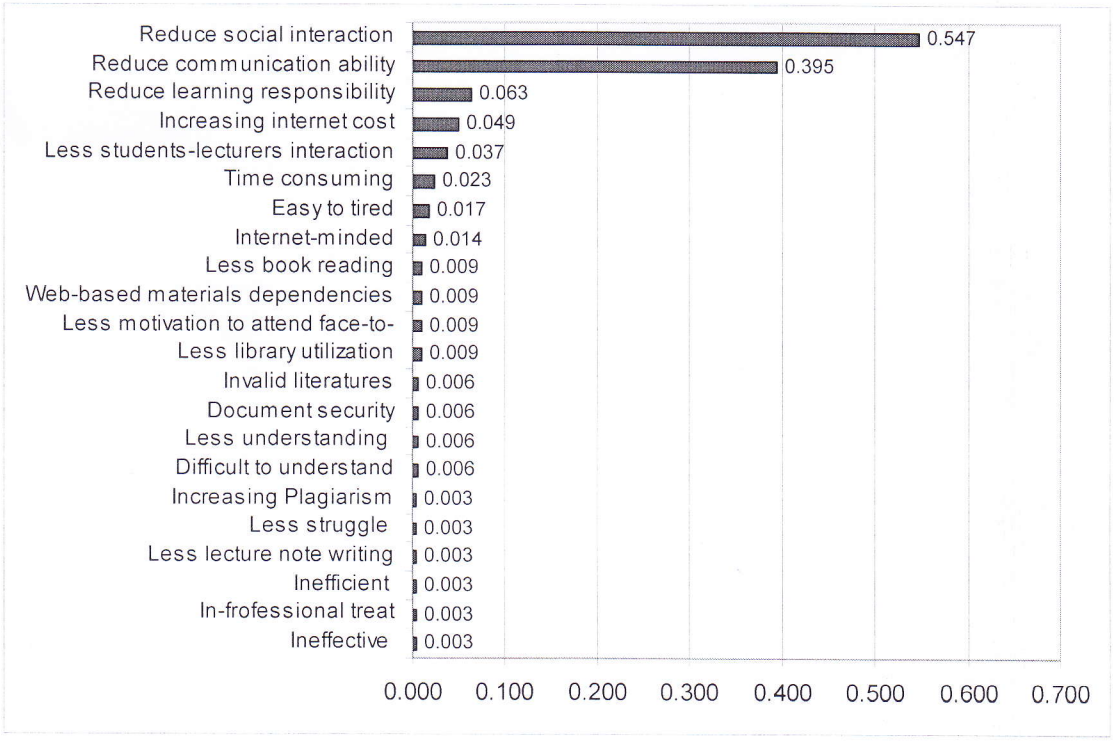

Figure 5. Negative impacts of web-based learning

1.4 Discussion

Based on the result of the study, the current web based learning in DIY universities need to be improved. It is not yet effective and efficient enough as learning mode. Lack of facilities and high internet cost is cited as the major barriers to its adoption. While the lack of useable materials has been identified as the least of the concerns in the use of web based learning, it has nonetheless become a real barrier to web utilization in the educational process. The lack of human resources in particular lecturers as a main support system is also identified as an obstacle to making the use of it efficient and effective. In this regard, institutions need for expert, technical knowledge and for time to develop materials. In line with this, institutions should concern with media literacy both for lecturers and students. Some suggestion to the universities to examine the barriers to provision of Web based learning in DIY universities is setting up ICT support such as network management and multimedia support center for improving web content, training in multimedia equipment use, and support for creation of multimedia materials

Writing textbooks for e-learning is more difficult than printed, used for face-to-face learning because it required some additional skills such as the making questions for students, plus additional ICT-related items such as e-mail, log in, and so on.

Issues of pedagogy – how to teach effectively by incorporating the new technology – should occupy a major place in improving the system. By using technology, students knowledge can be increased, but maintaining two-way or face-to-face communication remains an important aspect of educational technology. Behind this is the notion that face-to-face communication provides the best educational environment. How to effectively incorporate the extensive information, communication, and interactive facilities of the web have barely been developed. The learning, and how to design effective for web-based learning, and how to design effective learning materials for the web, are important.

The lack of web-based teaching materials lies in the approaches used. The materials should allow students an asynchronous dimension of learning, with an occasional or chat space for student discussion. But the underlying teaching focus is largely the transfer to student, through most learning on the Internet still moves from teacher to student, through the substitution of the package as virtual teacher.

Currently students have to study alone using communications networks. Institutions should gives student support, if possible a local tutor who the student can meet from time to time, the achievements of the students are less successful and in many cases they give up studying.

Students are also aware to the negative impact of the utilization of ICT in education such as copyright and intellectual properties. Even if the agreements on "open" content, there are still some limitation from the law system in each country and social and cultural differences. "Exemptions for educational uses" usually have some differences from the fair-use. The quality of the web content could be another issue considered by students. With regard to uninteresting display, lecturers need selective adaptation, designing creative learning process and evaluating the students' works.

E-learning possessed some advantages such as enabling the students to arrange their own time to study, greater access than the traditional course, could work and study without leaving the job. However, e-learning's flexibilities can cause the student becoming lazy as they can postpone the study without any control from anybody. With such conditions, e-learning needs procedure to keep up the students' motivation to learn, to control the learning progress and evaluate his or her output.

The language does play a role. While ICT's instruction, manuals, standards are dominated by English language, then language ability should be improved.

1.5 Conclusion

We have presented the result of our survey on the effectiveness of e-learning, in particular web-based learning, in DIY universities. With such conditions then the improvement of web-based learning requires the integration of various factors. Universities should improve the infrastructure and encourage lecturers to effectively use the web-based learning. Multimedia support centre is also needed to develop web content and to overcome media literacy both for lecturers and students.

Acknowledgement

This paper summarizes the result of the study supported financially by 2009 Research Grant provided by Center for Improving and Developing Instructional Activities (P3AI), University of National Development (UPN) "Veteran" Yogyakarta, Indonesia.

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Yoshida, A., and Bachnik, J.M, 2003, *Roadblocks on the Information Highway: The IT Revolution in Japanese Education*, Edited by J.M. Bachnik, Lexington Books,

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